

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-11 and 14-20 in the reply filed on October 30, 2009 is acknowledged. Non-elected claims 12-13 are withdrawn from consideration but will be considered for rejoinder upon the allowance of claim 1.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-11 and 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

Concerning claim 1, the term "type" in line 3 is a relative term which renders the claim indefinite. The use of "type" is indefinite in a claim, *Ex parte Copenhaver*, 109 USPQ 118. Deletion of the term "type" will obviate this rejection.

Concerning claim 1, the term "it" in line 6 is indefinite because it is unclear what structure the word "it" is intended to describe.

Claim 1 recites the limitation "the post-discharge flow" in line 4. There is insufficient antecedent basis for this limitation in the claim.

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Claim 1 recites the limitation "the surface" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the latter" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 3

Concerning claim 3 the term "low" in line 3 is a relative term which renders the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 3 recites the limitation "the walls" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the nitrogen atoms" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6

Concerning claim 6, the term "peculiar" in line 3 is a relative term which renders the claim indefinite. The term "it" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 6 recites the limitation "the heating means" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7

Claim 7 recites the limitation "the nature" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitations "the effect of the recombination" and "the nitrogen atoms" in line 9. There is insufficient antecedent basis for these limitations in the claim.

Concerning claim 7, the term "it" in line 5 is indefinite because it is unclear what structure the word "it" is intended to describe.

Claim 11

Claim 11 recites the limitation "the sterilization chamber" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "provided with additional, in particular electric, heating means". This limitation is indefinite because it is unclear if the Applicant intends for the heating means to only be electric or include other heating means.

Claim 15

Claim 15 recites the limitation "the walls" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Concerning claim 15 the term "low" in line 3 is a relative term which renders the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 15 recites the limitation "the nitrogen atoms" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 18

Claim 18 recites the limitation "the nature" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitations "the effect of the recombination" and "the nitrogen atoms" in line 9. There is insufficient antecedent basis for these limitations in the claim.

Concerning claim 18, the term "it" in line 5 is indefinite because it is unclear what structure the word "it" is intended to describe.

Claim 19

Claim 19 recites the limitation "the nature" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Concerning claim 19, the term "it" in line 5 is indefinite because it is unclear what structure the word "it" is intended to describe.

Claim 20

Claim 20 recites the limitation "the nature" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Concerning claim 20, the term "it" in line 5 is indefinite because it is unclear what structure the word "it" is intended to describe.

Claims 2, 4-5, 8-10, 14, and 16-17

Claims 2, 4-5, 8-10, 14, and 16-17 are rejected for at least the reasons applied to claim 1 above since these claims ultimately depend from and include all of the limitations of independent claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-11 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Denes et al. (U.S. Patent No. 6,096,564).

Concerning claim 1, Denes discloses a device that is capable of being used to sterilize objects, in particular medical or surgical instruments, of the type adapted to create from a gaseous flow subjected to an electric field a gaseous plasma of which the post-discharge flow which issues therefrom is brought into contact with the surface of the objects to be treated, characterized in that the device comprises:

- means (combination of upper electrode 22, lower electrode 23, plasma reaction region 24, and a radio frequency power supply 27) adapted to produce said plasma from a gaseous flow exclusively constituted by nitrogen (see figure 1; see col. 5, lines 25-34; see col. 2, lines 63-67),

- means (heater 35) capable of heating said objects adapted to take the latter, in the course of treatment, to a temperature of at least 60°C (see col. 5, lines 14-23 and 40-43).

Concerning claims 2-11 and 15-20, the claims do not positively recite the structure of a sterilization chamber or its components (i.e. object-holder) as being part of the claimed device. Specifically, claim 2 recites that the post-discharge gaseous flow is

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“admitted into” a sterilization chamber but does not recite that the device comprises or includes any such sterilization chamber. Therefore, the limitations of claims 2-11 and 15-20 are directed to the function of the device and/or the manner of using the device. All of the structural limitations directed to the claimed device as recited in claims 1-11 and 15-20 have been disclosed by Denes et al. and the device of Denes et al. is capable of being used in combination with the sterilization chamber as recited in claims 2-11 and 15-20. As such, it is deemed that the claimed device is not differentiated from the device of Denes et al. (see MPEP §2114).

Furthermore, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moulton et al. (U.S. Patent No. 5,178,829) in view of Jacob et al. (U.S. Patent No. 5,741,460).

Moulton et al. discloses a method for sterilizing objects, in particular medical or surgical instruments, in which a plasma is created by action of an electric field on a gaseous flow and the post-discharge flow which issues therefrom is brought into contact with the surface of the objects to be treated, characterized in that:

- nitrogen is used as gaseous flow, and
- heating of the objects to be treated to a temperature of at least 60°C is ensured (see col. 2, line 55 to col. 3, line 18; see col. 3, line 65 to col. 6, line 47).

However, Moulton et al. does not appear to explicitly disclose that the gas used for producing the plasma is exclusively nitrogen. Moulton et al. discloses that nitrogen is used in combination with other gases to form the plasma (see col. 3, lines 5-13).

Jacob et al. discloses a method of sterilizing medical devices in a chamber by exposing the devices to a gaseous plasma. The process includes exposing a gas (hydrogen, oxygen, nitrogen, halogens, or mixtures thereof) to an electrical discharge to form a plasma in the atmosphere where the articles are placed (see col. 2, lines 40-58; see col. 4, lines 40-47).

Therefore, since both Moulton et al. and Jacob et al. disclose processes for sterilizing medical articles by generating a plasma from a gaseous flow, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute one gaseous flow (mixtures containing nitrogen) for the other (exclusively nitrogen) in order to yield the predictable result of generating a plasma to sterilize the articles in the enclosure.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Conley whose telephone number is 571-272-8414. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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January 5, 2010

/Sean E Conley/
Primary Examiner, Art Unit 1797